SECTION-1: Identification of the substance / mixture and the company / undertaking

Catalogue Number	CS-T-38916
Product Name	1,2,3,4,5-Pentachlorobenzene
CAS No.	608-93-5
Category	Pesticide Standards
Synonyms	1,2,3,4,5-pentachlorobenzene
Brand	Clearsynth Labs Ltd.
Identified uses	Laboratory Chemicals
Uses advised against	Not available
Company	Clearsynth Labs Ltd. Mumbai, India
Emergency Phone #	+91-22-245045900
REACH No.	Not available

SECTION 2: Hazards identification

Disclaimer: This is sample MSDS. Please email **sales@clearsynth.com** for more details.

2.1 Classification of the substance or mixture-Regulation (EC) No 1272/2008:

Acute toxicity (Category 4)

2.2 Label Elements

Signal Word: Warning

Hazard Statement(s)

Code	Statement
H228	Not available
H302	Harmful if swallowed.
H400	Not available
H410	Not available

H361	Not available
H362	Not available
H371	Not available
H373	Not available

Precautionary Statement(s)

Code	Statement
P210	Not available
P240	Not available
P241	Not available
P264	Wash hands thoroughly after handling.
P270	Not available
P273	Not available
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P317	Not available
P330	Not available
P370+P378	Not available
P391	Not available
P501	Dispose of contents/container in accordance with local/regional/national/international regulatio
P203	Not available
P260	Not available
P263	Not available
P308+P316	Not available
P318	Not available
P319	Get medical help if you feel unwell.
P405	Store locked up.

SECTION 3: Composition / information on ingredients

3.1 Substance

Component : 1,2,3,4,5-Pentachlorobenzene
CAS Number : 608-93-5

Molecular Formula : C6HCl5
Molecular Weight : 250.32
Parent Chemical : -
Synonyms : 1,2,3,4,5-pentachlorobenzene
Concentration : Not available

SECTION 4: First aid measures

SECTION 4: First-aid measures

4.1 Description of first aid measures
- General advice: Remove contaminated clothing and shoes. Seek medical attention if symptoms persist or develop.
- Inhalation: Move person to fresh air. Keep at rest. If breathing is difficult, seek medical attention.
- Skin contact: Wash with plenty of soap and water. Seek medical attention if irritation persists.
- Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention.
- Ingestion: Rinse mouth. Do NOT induce vomiting unless directed by medical personnel. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed
- Not available.

4.3 Indication of any immediate medical attention and special treatment needed
- Treat symptomatically.
- No data available.

SECTION 5: Firefighting measures

SECTION 5: Fire-fighting measures

5.1 Extinguishing media
- Suitable extinguishing media: Dry chemical, carbon dioxide (CO2), alcohol-resistant foam, water spray (fog).
- Unsuitable extinguishing media: Not available.

5.2 Special hazards arising from the substance or mixture
- May decompose under fire conditions to release hazardous gases/vapors.
- Hazardous combustion products: Hydrogen chloride (HCl), chlorine-containing compounds, carbon oxides. (Exact composition: Not available.)

5.3 Advice for firefighters
- Wear self-contained breathing apparatus (SCBA) and full protective gear.
- Use water spray to cool unopened containers.
- Avoid inhalation of combustion products.

SECTION 6: Accidental release measures

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
- Evacuate unnecessary personnel.
- Avoid breathing dust/vapors.

- Use appropriate personal protective equipment (see Section 8).

6.2 Environmental precautions
- Prevent entry into drains, surface water, and soil.
- Notify authorities if significant contamination occurs.

6.3 Methods and material for containment and cleaning up
- Avoid generating dust.
- Collect spilled material using non-sparking tools and place in a suitable, labeled container for disposal.
- Clean contaminated area with suitable cleaning methods; avoid wash water entering drains.

6.4 Reference to other sections
- See Section 8 (Exposure controls/personal protection) and Section 13 (Disposal considerations).

SECTION-7: Handling and storage

SECTION 7: Handling and storage

7.1 Precautions for safe handling
- Handle in accordance with good industrial hygiene and safety practice.
- Avoid contact with skin and eyes.
- Avoid breathing dust.
- Use only with adequate ventilation (local exhaust recommended).
- Wash hands thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities
- Store in tightly closed container in a cool, dry, well-ventilated place.
- Protect from heat and sources of ignition.
- Keep away from incompatible materials.
- Incompatible materials: Strong oxidizing agents (further incompatibilities: Not available).

7.3 Specific end use(s)
- Pesticide standard / laboratory use. Additional information: Not available.

SECTION 8: Exposure controls / personal protection

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
- Occupational exposure limits: Not available.
- Biological limit values: Not available.

8.2 Exposure controls
- Engineering controls: Use local exhaust ventilation or other engineering controls to maintain airborne levels below applicable limits (limits: Not available).
- Personal protective equipment (PPE):
- Eye/face protection: Safety glasses with side shields or chemical splash goggles.
- Skin protection: Protective gloves (material selection dependent on use conditions; specific breakthrough time: Not available). Wear protective clothing as needed.
- Respiratory protection: If ventilation is inadequate or dust is generated, use an appropriate NIOSH/EN-approved respirator (specific type: Not available).

- Hygiene measures: Remove contaminated clothing and wash before reuse. Do not eat, drink, or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Test	Result
Appearance	No data available
IR spectrum	No data available
pH	No data available
Solubility	No data available

Property	Value
a) Physical State	No data available
b) Color	No data available
c) Odor	No data available
d) pH	No data available
e) Vapour Pressure	No data available
f) Viscosity	No data available
g) Initial Boiling Point and boiling range	No data available
h) Melting Point / Freezing Point	No data available
i) Auto Ignition Temperature	No data available
j) Flash Point	No data available
k) Explosion Limit, Lower	No data available
l) Explosion Limit, Upper	No data available
m) Decomposition Temperature	No data available
n) Loss on Drying	No data available
o) Relative Density	No data available
p) Solubility (in DMSO)	No data available
q) Oxidizing Properties	No data available

SECTION 10: Stability and reactivity

SECTION 10: Stability and reactivity

10.1 Reactivity
- No data available.

10.2 Chemical stability
- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
- Hazardous polymerization: Not expected.

10.4 Conditions to avoid
- Heat, open flames, sparks, and other ignition sources.
- Dust generation.

10.5 Incompatible materials
- Strong oxidizing agents.

10.6 Hazardous decomposition products
- Hydrogen chloride (HCl), chlorine-containing compounds, carbon oxides. (Further information: Not available.)

SECTION 11: Toxicological information

11.1 Information on toxicological effects
- Acute toxicity: /LABORATORY ANIMALS: Subchronic or Prechronic Exposure/ In a combination general toxicity reproduction study, weanling female rats were fed diets containing 0, 125, 500, or 1000 ppm QCB for 6 months; males received 0, 125, or 1000 ppm for 100 days. There was no evidence of QCB induced body weight losses, mortality, clinical abnormalities, or changes in feed consumption. Hematological examinations indicated slightly lower valuesfor hematocrit and erythrocyte counts in high dose males, and hemoglobin reductions and leukocyte count increases in both sexes at the high dose. Visual examination (viscera with ultraviolet light) and biochemical analyses (livers of females) to assess potential porphyria indicated no significant evidence for this metabolic lesion. There were increases observed for liver weights in rats fed 500 and 1000 ppm with microscopic evidence for hepatocellular hypertrophy and vacuolization. Male rats had evidence in kidneys of hyaline droplet formation, atrophic tubules, and lymphocytic infiltration.
- Skin corrosion/irritation: No data available.
- Serious eye damage/eye irritation: No data available.
- Respiratory or skin sensitization: No data available.
- Germ cell mutagenicity: No data available.
- Carcinogenicity: CLASSIFICATION: D; not classifiable as to human carcinogenicity. BASIS FOR CLASSIFICATION: No human data and no animal data available. HUMAN CARCINOGENICITY DATA: None. ANIMAL CARCINOGENICITY DATA: None. /LABORATORY ANIMALS: Chronic Exposure or Carcinogenicity/ A stochastic clonal growth model for describing quantitative changes in size and number of putative preneoplastic lesions was modified to analyze the time-course information of cell proliferation and glutathione S-transferase pi (GST-P) foci within a medium-term bioassay. The study used F344 rats and a single initiating event using diethylnitrosamine (200 mg/kg ip) at Week 0. After a 2-week recovery period, chemical treatment began by gavage administration of pentachlorobenzene (PeCB; 100 micromol/kg/day, 7 days/week) in a corn oil vehicle and continued for 6 weeks. One week after beginning gavage dosing, a two-thirds partial hepatectomy was performed and the animals were serially euthanized at 48, 120, 168, 624, and 840 hr postsurgery, which corresponds to 216, 288, 336,

792, and 1008 hr following the beginning of PeCB treatment, respectively. For analysis, two types of models were evaluated for describing the time-course changes in GST-P foci. First, a sequential model describing the transformation of normal cells into a homogenous initiated cell population (i.e., one-cell model). Second, a two-cell model that describes a heterogeneous foci population by splitting the initiated cell population into two distinct types. In /this/ study, the one-cell model was unable to adequately represent the time-course data for changes in both size and number of foci. In contrast, the two-cell model, which was parameterized to describe a negative selection mechanism, produced adequate simulations of both the size and number of foci. This model-based analysis suggested that the differences between PeCB-treated and untreated animals were primarily in parameters involving the rates of cell death.
- Reproductive toxicity: /LABORATORY ANIMALS: Developmental or Reproductive Toxicity/ In a combination general toxicity reproduction study, weanling female rats were fed diets containing 0, 125, 250, 500, or 1000 ppm QCB for 6 months; males received 0, 125, or 1000 ppm for 100 days. ... Treated males and females were mated to untreated rats. There were no adverse effects observed in litters of treated (125 adn 1000ppm) males. Offspring of 250, 500, and 1000 ppm treated females were adversely affected. Survival of F1 pups and weanling body weights were depressed in the 500 and 1000 ppm groups. Liver to body weight increases as well as hepatocellular hypertrophy were seen in pups in the three highest dose groups, suggesting a transferral of compound from dams to offspring during gestation and/or lactation.
- STOT-single exposure: No data available.
- STOT-repeated exposure: /LABORATORY ANIMALS: Subchronic or Prechronic Exposure/ In a combination general toxicity reproduction study, weanling female rats were fed diets containing 0, 125, 500, or 1000 ppm QCB for 6 months; males received 0, 125, or 1000 ppm for 100 days. There was no evidence of QCB induced body weight losses, mortality, clinical abnormalities, or changes in feed consumption. Hematological examinations indicated slightly lower valuesfor hematocrit and erythrocyte counts in high dose males, and hemoglobin reductions and leukocyte count increases in both sexes at the high dose. Visual examination (viscera with ultraviolet light) and biochemical analyses (livers of females) to assess potential porphyria indicated no significant evidence for this metabolic lesion. There were increases observed for liver weights in rats fed 500 and 1000 ppm with microscopic evidence for hepatocellular hypertrophy and vacuolization. Male rats had evidence in kidneys of hyaline droplet formation, atrophic tubules, and lymphocytic infiltration. /LABORATORY ANIMALS: Subchronic or Prechronic Exposure/ Female adult Wistar rats were fed with a diet containing 0.05% hexachlorobenzene (HCB) or its metabolites, pentachlorobenzene (PCB) and pentachlorphenole (PCP). These chlorinated aromatic hydrocarbons produced an increase in the liver cytochrome P-450 content in about the same degree, however, only the application of HCB showed an extremely high rise in the P-450 enzymatic activity expressed in terms of the O-dealkylation of 7-Ethoxycoumarine. No alteration was observed in the urinary porphyrin excretion in the PCB and PCP treated animals, whereas 60 days after the beginning of the HCB application a high level of porphyrins could be detected in the urine of the animals. It seems unlikely therefore that the HCB metabolites (PCB and PCP) are porphyrogenic agents. In addition, although induction of the liver cytochrome P-450 system was observed after PCP pretreatment of the rats over a period of 40 days, the consequent application of HCB did not influence the establishment of the experimental porphyria.
- Aspiration hazard: No data available.

Likely routes of exposure
- No data available.

Symptoms related to the physical, chemical and toxicological characteristics
- /LABORATORY ANIMALS: Developmental or Reproductive Toxicity/ In a combination general toxicity reproduction study, weanling female rats were fed diets containing 0, 125, 250, 500, or 1000 ppm QCB for 6 months; males received 0, 125, or 1000 ppm for 100 days. ... Treated males and females were mated to untreated rats. There were

no adverse effects observed in litters of treated (125 adn 1000ppm) males. Offspring of 250, 500, and 1000 ppm treated females were adversely affected. Survival of F1 pups and weanling body weights were depressed in the 500 and 1000 ppm groups. Liver to body weight increases as well as hepatocellular hypertrophy were seen in pups in the three highest dose groups, suggesting a transferral of compound from dams to offspring during gestation and/or lactation.

SECTION 12: Ecological information

SECTION 12: Ecological information

12.1 Toxicity
- No data available.

12.2 Persistence and degradability
- No data available.

12.3 Bioaccumulative potential
- No data available.

12.4 Mobility in soil
- No data available.

12.5 Results of PBT and vPvB assessment
- Not available.

12.6 Endocrine disrupting properties
- No data available.

12.7 Other adverse effects
- No data available.

SECTION 13: Disposal considerations

SECTION 13: Disposal considerations

13.1 Waste treatment methods
- Dispose of contents/container in accordance with local/regional/national/international regulations.
- Do not discharge to drains or the environment.
- Recommended disposal method: Incineration or disposal via a licensed waste contractor (specific method dependent on local regulations).
- Contaminated packaging: Dispose of as unused product unless cleaned according to applicable regulations.

SECTION 14: Transport information

SECTION 14: Transport information

- UN number: Not available.
- UN proper shipping name: Not available.
- Transport hazard class(es): Not available.
- Packing group: Not available.
- Environmental hazards: Not available.

- Special precautions for user: Not available.
- Transport in bulk according to IMO instruments: Not available.

Note: Transport classification may vary by mode (ADR/RID, IMDG, IATA). Confirm with current regulatory listings and shipping documents.

SECTION 15: Regulatory information

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Regulatory status/inventories: Not available.
- GHS classification: Not available.
- Label elements: Not available.

15.2 Chemical safety assessment
- No data available.

SECTION 16: Other information

SECTION 16: Other information

- Product name: 1,2,3,4,5-Pentachlorobenzene
- CAS No.: 608-93-5
- Catalog No.: CS-T-38916
- Supplier: Clearsynth Labs Ltd., Mumbai, India
- Emergency phone: +91-22-245045900

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- The information provided is based on available product identification details and is intended for SDS authoring support. No warranty is expressed or implied. Users are responsible for determining applicability and compliance with applicable laws and regulations.

Revision information
- Revision date: Not available.
- SDS version: Not available.

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